

structure, comprising: providing a substrate which comprises a C4 metallurgy contact pad and a fuse therein; forming an etch resistant layer over the C4 metallurgy contact pad and the fuse; forming at least one passivating layer over the etch resistant layer; removing at least a first portion of the at least one passivating layer and the etch resistant layer to expose the C4 metallurgy contact pad; forming a C4 metallurgy structure on the C4 metallurgy contact pad; and thereafter removing at least a second portion of the at least one passivating layer to expose the etch resistant layer over the fuse.

[0011] Further, in accordance with the invention, there is provided a method of performing a fuse deletion process, comprising: providing a substrate which comprises a C4 metallurgy contact pad and a fuse therein; forming an etch resistant layer over the C4 metallurgy contact pad and the fuse; forming at least one passivating layer over the etch resistant layer; removing at least a first portion of the at least one passivating layer and the etch resistant layer to expose the C4 metallurgy contact pad; forming a C4 metallurgy structure on the C4 metallurgy contact pad; thereafter removing at least a second portion of the at least one passivating layer to expose the etch resistant layer over the fuse; and applying a radiant energy source to the fuse until the etch resistant layer over the fuse is substantially removed.

[0012] The foregoing and other features and advantages of the invention will be apparent from the following more particular description of embodiments of the invention.

Brief Description of Drawings

[0013] The embodiments of this invention will be described in detail, with reference to the following figures, wherein like designations denote like elements, and wherein ~~FIGS. 1A-C~~ ^{FIGS. 1A-C} are schematic section views illustrating the method in accordance with the present invention.

Detailed Description

[0014] Referring to the drawings, and more particularly to Fig. 1A, there is shown a cross-section of a substrate 1 having several metal wiring layers formed therein. In this embodiment, the substrate 1 is illustrated with three metal wiring layers, with each having metals 2-4 embedded in respective dielectric layers 5-7. It will be